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ABSTRACT

The status of work-based learning in the programs/courses of Georgia's technical institutes was reviewed, and issues raised by recent national and state legislation regarding education's role in preparing students for the workplace were identified. It was discovered that a total of 54 occupation-based instruction (OBI) programs are currently being offered at 45% of Georgia's technical institutes. Little uniformity was found with respect to the types of activities included in programs, the sites where activities occur, and the work and study requirements of the various occupational experiences (apprenticeships, practicums, internships, and combinations thereof). It was concluded that, in view of the increasing importance that policymakers and legislators are placing on OBI, future planning for articulation between secondary and postsecondary curricula will require further examination of how OBI will be integrated into tech prep, apprenticeship, and other school-to-work programs. It was further concluded that the process of determining the adequacy and appropriateness of OBI courses/programs in technical institutes must be a collaborative effort involving tech prep/apprenticeship coordinators, state-level administrators, technical institute faculty, and researchers. (Appendixes constituting approximately 75% of this document contain tables summarizing OBI activities and courses with a work-based learning component at Georgia technical institutes.) (MN)

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Status of Work-Based Learning in Georgia Technical Institutes

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The purpose of this report is to describe the status of work-based learning in the programs and courses of Georgia's technical institutes, and to identify issues raised by recent national and state legislation about the role of education in preparing students for the workplace.

The Changing Legislative Environment

The last several years have been a time of rapid change for vocational and technical education in the state of Georgia. Several major pieces of federal legislation have impacted curriculum at the secondary, and to a lesser extent, postsecondary levels of classroom instruction. Tech Prep, the School-to-Work legislation, and the new Apprenticeship law (PL 20-2-161-2) passed by the Georgia legislature are profoundly affecting the delivery of educational services to students throughout the state.

The 1990 amendments to the Carl D. Perkins legislation created the Tech Prep Education Act of 1990. This law requires that tech prep programs a) combine instruction at secondary and postsecondary levels leading to an associate degree or 2-year diploma; b) provide technical preparation in at least one field of engineering technology, applied science, mechanical, industrial/practical art or trade, agriculture, or business; c) increase student competence in academic subjects such as math and science; and d) lead to job placement. Almost all of Georgia's counties have at least one school district which is implementing a Tech Prep program of instruction. Consequently, the next several years will see high school students moving into a variety of postsecondary technical institute programs throughout the state. They will arrive with a new set of skills and experiences acquired through exposure to innovative teaching methodologies such as applied academics, integrated academic and vocational classes, team teaching, portfolio assessment, and extensive use of computer-assisted instruction.

The recently enacted federal School-to-Work Opportunities Act of 1994 provides money to the states to encourage integration of school and work-based learning, integration of academic and vocational curricula, and a mechanism to link secondary and postsecondary education into a seamless transition for students who choose to pursue two or four-year college programs. Georgia is currently preparing its statewide plan for implementing School-to-Work programs at all levels of education, to meet the requirements of federal funding agencies.

A major focus of this new law is Apprenticeship training. The state of Georgia has passed legislation through PL 20-2-161-2 (The Youth Apprenticeship Program), which requires all school districts to provide opportunities for student participation in an Apprenticeship training program by Fall of the 1994/95 school year. Students may begin this training in the 11th grade and continue on through grade 12 in high school and grades 13 and 14 in technical school, or through a four-year baccalaureate program at a college or university. A recent agreement between the Georgia University System and the Department of Technical and Adult Education formalizes a commitment to articulation among the two and four-year programs of the technical institutes and the state's colleges and universities. The Youth Apprenticeship Program legislation

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authorizes the provision of money for secondary school-based coordinators. These coordinators will be responsible for establishing communication with business and industry personnel to plan and initiate work-based learning programs in business locations. The coordinators will also be responsible for oversight of student progress in the business setting during the period the participating student is enrolled in high school grades 11 and 12.

A key area affected by these changes is the work-based learning courses provided by the technical institutes in a variety of diploma and associate degree programs. The immediate future will see a major emphasis on work-based learning at both the secondary and postsecondary levels. How will the reform initiatives of Tech Prep, Apprenticeship, and other School-to-Work implementation impact postsecondary technical curricula?

Issues and Problems Surrounding Work-Based Learning and Instruction

Very shortly, a significant population of Georgia's students will begin enrolling in Apprenticeship programs and will acquire credit for their work-based learning experience. Currently there is little uniformity among the various Occupation-Based Instruction (OBI) courses offered at the technical institutes, which will create problems in coordinating apprenticeship experience, as well as credit for that experience. To what extent do current technical institute OBI programs (54 total) currently fit the parameters that have been established for Apprenticeship programs?

For example, PL 20-2-161-2 requires that 2,000 hours of on-the-job training be provided to students participating in the work-based learning section of the Apprenticeship program. Can credit be given as OBI for a part of those 2,000 work-based learning hours which occur during apprenticeship training? How will a technical institute instructor/administrator proceed if not all the competencies listed in the OBI course are met through activities that occur within this 2,000 hour time frame? How will selected competencies for the Apprenticeship program be dovetailed into existing technical fundamental and occupation-specific coursework if the 2,000 hours includes competencies that are found in these courses? What basis will be used to equate apprenticeship contact hours with credits at the technical institutes? Who will be responsible for student oversight when the student continues from apprenticeship into postsecondary school enrollment? The program standards and guides list the competencies which students must master to fulfill the OBI requirements. If high school coordinators are to be responsible for apprenticeship students as they continue into grades 13 and 14 at the technical schools, community colleges, or perhaps in a four-year baccalaureate degree, then is the language of the competencies or other program requirements clear and complete enough for these coordinators to have a fully understand what that language means and how it affects articulation?

Some of the competencies for OBI courses (Appendix B) are common to almost all work-based learning environments, such as, social skills (relating to and working with co-workers) which cross all program areas. Specific skills such as adjusting brakes on an automobile or successfully welding steel plate are individually defined for their particular program area. This raises the question of whether it would be advantageous to create a generic set of competencies which could apply to all program areas in health, business, construction, manufacturing or agriculture. The question of how specific or general competencies should be written for the affective, psychomotor, and cognitive domains must be considered when addressing revisions to OBI courses. Similarly, is there any advantage to writing a "generic" set of competencies for **all** OBI courses to facilitate ease of transition and understanding between secondary and postsecondary instructors and staff? This could build on statewide skills standards currently under development for public education in the state of Georgia.

Occupation-Based Instruction (OBI) at the Technical Institutes

'his section presents a definition of work-based :arning terms, and examines the status and tructure of technical institute OBI courses, the hysical placement of students (lab vs. work :tting), and variation in credit hours, class hours, nd lab hours. It also provides basic data for nswering questions posed in the previous section. 'ourse information is summarized in Appendices A nd B.

Definitions: The program standards and uides for the technical institutes provide a efinition of Occupation-Based Instruction (OBI): *'ccupation-based instructional delivery systems ıclude educational work experiences, internships, 'acticums, and other specialized and/or ınovative learning arrangements.*

OBI, then, is an all encompassing term hich can include a wide variety of work-based arning experiences in both a business/industry :tting and/or a classroom/lab setting. OBI courses ıve the following titles: internship, practicum, ternship/practicum, clinical lab, and externship. esearch of current literature revealed several :finitions of internships and youth apprenticeship hich may assist in understanding how these terms e currently being used by a variety of institutions descriptors of programs.

Internships: Programs designed to provide ıdents with additional development of technical ımpetencies in a work setting.

Internships allow students to observe and rticipate in daily operations, develop direct ntact with job personnel, ask questions about a rticular career, and perform certain job tasks. udents, teachers, and employers meet regularly to aluate the experience as well as the work rformed. (North Carolina Bureau of Public struction, 1993.) Generally, internships go to vanced students who need experience putting o practice what they have learned in a vocational ogram. Teachers arrange for employers to hire ıdents during the summer or after school. nployers agree to provide a variety of experiences, most of which the school cannot provide. Students and employers prepare weekly reports on work performed and evaluate the experience. (Cheek and Campbell, 1994.) Internship opportunities may include both paid and unpaid experiences and prepare students for placement with their internship sponsors or other employers, and/or for further education. Internships can offer opportunities in higher-level positions which would otherwise be unavailable to students, thereby building trained and experienced students who are ready to enter the workforce. They also provide work-based learning, school-based learning, and connecting activities for participants.

Apprenticeship: A detailed training plan between the employer and the apprentice that identifies specific work tasks for developing work place competency; a minimum of 144 classroom hours of related academic instruction and training; a minimum of 2000 hours of on the job training; a progressive wage schedule established by the participating employer; on-site evaluation of the pupils performance; training remediation as necessary at the school site; a broad range of skills with a focus on manufacturing and engineering technology, administration and office technology, and health care; development of materials by the business, industry, and labor community in conjunction with the department to promote the awareness of apprenticeships for high school students and encourage recruitment; and a structural linkage between secondary and postsecondary components of the program leading to the awarding of a high school diploma and postsecondary certification of occupational skills.

The Apprenticeship program shall include on-site training only in positions that have been certified by the Department of Labor as highly skilled jobs in business and industry. (Georgia PL 20-2-161-2.)

Practicum: A unit of work done by an advanced student involving practical application of previously studied theory and the collection of data for future theoretical interpretation. (Webster's New Collegiate Dictionary, 1977.) Practicum

activities occur in a lab, clinical setting, or simulated (practice) work environment, usually located at the educational institution, where students may practice skills application under an instructor's supervision.

Extent of OBI in technical institute programs: There are 148 courses which are identified as having an OBI component (see Appendix B). A total of 54 programs (from a total of 120 standardized programs) or 45% of technical institute curricula include some form of work-based learning through OBI instruction in at least one required course. Some programs require more than one OBI course. In two programs, OBI is an elective. A number of OBI courses are used in more than one program.

Structure of OBI courses: A review of the program standards and guide descriptions for OBI courses in the technical institutes reveals a mixed picture of exactly what activities occur and where they take place during student participation in work-based learning classes. Some courses are listed simply as OBI instruction, e.g., Drafting or Forest Technology. Some courses list OBI but spell out specific types of instruction, e.g., Fashion Production and Management (see Appendix B, FPM 114 which lists **OBI - Alterations Internship**). Some courses list a single internship or practicum. Other courses, Cosmetology for example, list practicum/internship as a descriptor of the work-based learning experience. Still other examples become much more complex: Printing and Graphics Technology lists a practicum / internship with either 30 performance lab hours or 30 OBI hours.

It is not always clear from the standards and guides if practicums occur on school sites or in business/industry locations; neither is it clear when one location is appropriate and another is not. Some technical institutes may be located in geographical areas that make a business/industry site impractical for situating students in internships/apprenticeships because of a lack of suitable industry or perhaps because of the smallness in size of the existing industries or an absence of administrative sophistication. The small "mom and pop" businesses in rural communities face many barriers to participation in work-based learning cooperative ventures. The location of technical schools near urban centers may provide a better opportunity for an internship type of experience (because adequate industrial sites are available) while the rural schools must rely on more of a practicum type of program (by definition more school-site oriented). The standards and guides for most programs allow flexibility for regional differences, but are, as mentioned above, unclear as to when a specific program - internship or practicum - is appropriate for a particular situation.

A word of explanation is required regarding Performance Lab (PLab) versus off-school site learning opportunities at the technical institutes. Cosmetology can be used as an example. Reference to Appendix B will show that COS 113 and 114 Practicum courses require 12 and 10 hours of **PLab** experience respectively. This instruction occurs *in the technical school lab classroom*. COS 115 and 116 are practicum/internship experiences and, according to definition, would normally occur in a local beauty salon off campus. The course description for COS 115 and 116 states: "The requirements for this course may be met in a laboratory setting or in a combination of a laboratory setting and in an approved intership facility." Thus, the program structure allows for a maximum amount of flexibility for the student in gaining OBI experience. It should also be noted that the laboratory classroom setting in many technical institutes is very similar in decor, equipment, and activity, compared to that which is found in a business setting. Consequently, the learning experience in performance labs is very close to what a work-based experience would provide.

A possible point of confusion when assigning credit could arise if the requirements for OBI courses were accommodated through work-based learning activity occuring as part of the OJT during an apprenticeship experience. Another possible point of confusion for secondary school instructors is the fact that some OBI courses are

Elective courses, rather than required courses.

Conclusions and Recommendations

In summary, it is apparent that future planning for articulation between secondary and postsecondary curricula will require an examination of how occupation-based instruction will be integrated into programs like Tech Prep, Apprenticeship, and other School-to-Work related programs. Curriculum planners will need to examine competency areas to determine where and how specific competency goals and objectives may be divided, assigned, and coordinated between technical school OBI courses and secondary school activities such as Tech Prep and Apprenticeship programs. Current terms and definitions may not be sufficiently clear in providing adequate definition for universal use between secondary and postsecondary instructors and staff.

The School-to-Work Opportunities Act appears to signal U.S. Department of Education and U.S. Department of Labor emphasis on the importance of occupation-based instruction. An examination of existing credit and contact hours in technical institute OBIs reveals a pattern of non-uniformity. Contact, credit hours, and competencies for OBI courses might need revision as these new programs gather momentum and increasing numbers of secondary school students enroll in technical school programs. The current occupation-based instruction courses in technical insitutes will need to be examined for adequacy and appropriateness. This process will be facilitated if the Tech Prep and Apprenticeship coordinators work in close cooperation with DTAE, technical institute faculty, and the Occupational Research Group staff to revise and adapt the occupation-based instruction courses to fit the new Tech Prep, Apprenticeship, and other School-to-Work programs that are currently under development. Program plans will need to be in place at the technical institutes to accommodate these new reform initiatives within the next two years so that students who are currently enrolled and will matriculate through the 2 + 2 programs will do so with a minimum of confusion and duplication.

Planning must begin now to develop a truly seamless and integrated education system that will link K-12, two-year, and four-year programs in preparing students for the workforce.

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GDTAE Research Briefs are prepared by the Occupational Research Group at the University of Georgia, under contract to the Georgia Department of Technical and Adult Education, to summarize emerging issues in the national literature on postsecondary technical education.

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APPENDIX A

SUMMARY OF INFORMATION

OBI AT TECHNICAL INSTITUTES

APPENDIX A - SUMMARY OF INFORMATION

OBI AT TECHNICAL INSTITUTES

Total number of courses with work-based learning components: 148

COURSE TITLE	NUMBER OF COURSES
Practicum	36
OBI	34
Internship	33
Clinical Lab	28
Internship/Practicum	14
Half-Time Internship	1
Externship	1
Office Simulation	1

Credit Hours Awarded

NUMBER OF CREDITS	NUMBER OF COURSES
1 credit hour	3
2 credit hours	13
3 credit hours	31
4 credit hours	17
5 credit hours	15
6 credit hours	21
7 credit hours	7
8 credit hours	12
9 credit hours	3
10 credit hours	8
11 credit hours	2
12 credit hours	15
13 credit hours	1

APPENDIX A - SUMMARY OF INFORMATION

Class hours required in OBI courses
(classroom instruction in addition to lab/work site instruction)

NUMBER OF CLASS HOURS	NUMBER OF COURSES
1 CLASS HOUR	15
2 CLASS HOURS	2
3 CLASS HOURS	1
5 CLASS HOURS	1
7 CLASS HOURS	1

Performance lab hours required in OBI courses

NUMBER OF PERFORMANCE HOURS	NUMBER OF COURSES
9	1
10	1
12	5
36	1

Performance lab hours or OBI hours

NUMBER OF PERFORMANCE LAB or OBI HOURS	NUMBER OF COURSES
8	1
10	1
12	1
20	1
24	2
30	2
32	1

APPENDIX A - SUMMARY OF INFORMATION

Summary of competencies most frequently included in OBI courses:

DESCRIPTION OF COMPETENCIES	NUMBER OF COURSES
Application of knowledge and skills	49
Problem solving	46
Interpersonal relations/customer relations	43
Equipment and technology adaptability and adaptability to the job setting	41
Professional development	37
Appropriate work habits/ethics/skills/attitudes and functioning in work environment	22
Appropriate employment skills/employment retention skills	10
Progressive productivity/development of productivity/work place productivity	9
Safety	9
Acceptable job performance	8
Listening	6
Following directions	6
Interpretation of work orders	5

List of Technical Institute standardized programs which include work-based learning:
(total number of programs: 54)

PROGRAM NAME	TYPE OF OBI
Accounting	Internship and half-internship
Air conditioning technology	Internship and practicum
Appliance servicing	OBI
Automotive technology	Internship
Barbering	Practicum/internship
Biomedical engineering technology	Internship
Business and information technology	Internship
Business facilities maintenance	Internship
Business and office technology	Internship and office simulation

APPENDIX A - SUMMARY OF INFORMATION

PROGRAM NAME	TYPE OF OBI
Information and office technology	Internship
Child development	Internship
Child development and related care	Internship
Commercial photography(diploma and degree)	Internship/practicum
Computer operation	Internship/practicum
Cosmetology	Practicum and practicum/internship
Culinary arts	Practicum
Dental assisting	Dental hygiene lab
Dental hygiene	Practicum
Dental laboratory(degree and diploma)	Practicum
Advanced drafting	Practicum
Drafting and design	Practicum and OBI
Distribution and materials management	OBI
Electronics technology (biomedical specialization)	Internship
Environmental horticulture	Internship
Fashion production and management	OBI
Fashion merchandising	OBI
Forest technology	OBI
Hotel/restaurant/travel management	OBI and internship
Industrial maintenance and industrial maintenance technology	Internship and practicum
Interiors	OBI
Law enforcement	Practicum and internship
Machine and tool technology and advanced machine tool technology	Internship
Management and supervision development (diploma and degree)	OBI and internship
Marketing management	OBI
Masonry	Internship

APPENDIX A - SUMMARY OF INFORMATION

PROGRAM NAME	TYPE OF OBI
Medical assisting	Externship
Medical laboratory technology and respiratory therapist	Clinical program
Ophthalmic dispensing	OBI
Paralegal studies	OBI
Paramedic technology	Clinical application
Pharmacy technology	Practicum
Physical therapist assistant	Practicum
Plumbing	Practicum
Advanced plumbing	Plumbing/internship
Practical nursing	Nursing fundamental and practicum
Printing and graphics technology	Practicum/internship and internship
Radiologic technology (diploma and degree)	Introductory/intermediate and advanced clinical radiography
Respiratory therapy technology	Respiratory care and respiratory critical care
Respiratory therapist	Clinical practice
Research laboratory technician	OBI
Surgical technology	Practicum
Truck repair	Internship
Veterinary technology	Internship
Advanced visual communication	Portfolio preparation/ internship

APPENDIX B

SUMMARY OF COURSE INFORMATION

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Child Development Child Development and Related Care	CHD	123	Internship III	3	1	0	0	6	Same as above
Child Development Child Development and Related Care	CHD	124	Internship	12	0	0	0	36	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Child Development and Related Care Techniques; Professional Development
Child Development Child Development and Related Care	CHD	127	Elective Internship IV	3	0	0	0	6	Good Work Habits; Application of Guidance Techniques; Interaction with Children and Parents; Weekly Plan Formulation; Daily Schedule Implementation;Equipment and Supplies
Commercial Photography, Diploma & Degree	CPH	124	Internship/ Practicum	4	1	0	0	9	Employability Skills; Photographic Skills
Computer Operations	CIS	126	Internship/ Practicum	10	0	0	0	30	Application of Classroom Knowledge and Skills; Practical Work Experience
Cosmetology	COS	113	Practicum	4	0	0	12	0	Permanent Waving and Relaxers; Hair Color and Bleaching; Skin, Scalp, and Hair; Haircutting; Styling Dispensary; Manicure/Pedicure; Reception; Safety Precautions; Hazardous Duty Standards Act Compliance
Cosmetology	COS	114	Practicum II	8	5	0	10	0	Same as above and: Advanced Styling and Shaping; Industry Concepts; Surviving in the Salon (Transition from class to employment)
Cosmetology	COS	115	Practicum/ Internship I	4	0	0	0	12	Same as COS 113
Cosmetology	COS	116	Practicum/ Internship II	5	0	0	0	12	Same as COS 113 and: State Licensure Preparation
Culinary Arts	CUL	208	Internship	5	0	0	0	15	Restaurant Mngt./On-Off Premise Catering/; Food Service Business; Supervisory Training; Management Training
Culinary Arts	CUL	211	Cuisine Internship	5	0	0	0	15	International/Nouvelle Continental Cuisine; Specialty Cookery; Kitchen Organization; Kitchen Management

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Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Culinary Arts	CUL	214	Commercial Baking Internship	5	0	0	0	15	Preparation and Decoration of Baked Goods; Display; Storage Equipment Use and Maintenance; Bakery Operations
Dental Assisting	DEN	141	Practicum I	1	0	0	0	3	Infection Control Procedures; Clinical Diagnostic Procedures; General Dentistry Procedures
Dental Assisting	DEN	142	Practicum II	2	0	0	0	6	General Dentistry Procedures; Dental Radiography Procedures
Dental Assisting	DEN	143	Practicum III	2	0	0	0	6	Advanced General Dentistry; Specialties
Dental Assisting	DEN	144	Practicum IV	4	0	0	0	12	Advanced General Dentistry Procedures; Chairside Oral and Maxillofacial Surgery; Management of Dental Office Emergencies
Dental Assisting	DEN	145	Practicum V	4	0	0	0	12	Adv. Gen. Dentistry; Proc. Expanded Functions; Preventive Dentistry; Dental Office Mgt.
Dental Hygiene	DHY	105	Preclinical Dental Hygiene Lab	2	0	0	0	6	Asepsis; Patient Examination; Emergencies; Instrumentation; Charting; Patient Positioning; Ethics; Oral health
Dental Hygiene	DHY	111	Clinical Dental Hygiene I Lab	3	0	0	0	3	Prevention; Occlusion; Instrumentation; Dental Appliances; Applied Techniques; Impression and Study Cast Techniques; Caries
Dental Hygiene	DHY	202	Clinical Dental Hygiene II Lab	3	0	0	0	9	Instrument Sharpening; Patient Assessment; Treatment Planning; Antimicrobial Use; Ultrasonic and Air Polishing Services; Amalgam Polishing/Recontouring; Pulp Vitality Testing; Oral Irrigation Devices; Treatment of Hypersensitivity
Dental Hygiene	DHY	209	Clinical Dental Hygiene III Lab	3	0	0	0	9	Instrument Sharpening; Applied Techniques; Scaling and Root Planing; Dental Health Edu.; Special Needs Patients; Oral Irrigation and Antimicrobial Agents
Dental Hygiene	DHY	214	Clinical Dental Hygiene IV Lab	4	0	0	0	12	Indices; Dietary Surveys; Recall Systems; Applied Techniques

APPENDIX B-SUMMARY OF COURSE INFORMATION

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Accounting	ACC	107	Internship	12	0	0	0	36	Appropriate Work Habits; Acceptable Job Performance; Application of Accounting Knowledge and Skill; Interpersonal Relations; Progressive Productivity
Accounting	ACC	108	Half Time Internship	6	0	0	0	18	Appropriate Work Habits; Acceptable Job Performance; Application of Accounting Knowledge and Skill; Interpersonal Relations; Development of Productivity
Air Conditioning Technology	ACT	150	Elective Inst. Devel. Internship/ Practicum	5	0	0	0	15	Residential Air Cond. & Refrig. Applications; Equipment & Technology Adaptability; Work Place Productivity; Safe Work Practices; Problem Solving; Employment Retention Skills
Air Conditioning Technology (Light Commercial Air Conditioning Internship/Pract.	ACT	203	Internship/ Practicum	12	0	0	0	36	Applic. of Comm. Refrig. Knowledge & Skills; Appropriate Employability Skills; Problem Solving; Adaptability to Job; Equip. & Technology; Progressive Productivity; Acceptable Job Performance
Air Conditioning Technology (Residential Air Conditioning Internship/Pract.	ACT	207	Internship/ Practicum	12	0	0	0	36	Applic. of Resid.; Refrig. Knowledge & Skills; Appropriate Employability Skills; Problem Solving; Adaptability to Job; Equip. & Technology; Progressive Productivity; Acceptable Job Performance
Air Conditioning Technology (Comm. Refrig. Internship/ Practicum)	ACT	211	Internship/ Practicum	12	0	0	0	36	Applic. of Comm. Refrig.; Knowledge & Skills; Appropriate Employability Skills; Problem Solving; Adaptability to Job; Equip. & Technology; Progressive Productivity; Acceptable Job Performance
Appliance Servicing	APS	108	Occ Based Instruction	5	3	0	0	8	Customer Relations; Service Call Records; Maintenance; Service Call Requirement Estimation; Service Call Planning; Safety Equipment and Supplies Management
Automotive Tech. Diploma	AUT	208	Internship	12	0	0	36	0	Applic. of Autom. Tech.; Knowledge and Skills; Appropriate Employability Skills; Problem Solving; Adaptability to Job Setting; Progressive Productivity; Acceptable Job Performance

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Barbering	BAR	120	Practicum/ Internship	3	0	0	10 OR	10	Haircutting/Styling; Thermal Waving; Hairstyling Texturizing; Hairpiece Fitting; Shaving and Styling; Beard Trimming; Safety Precautions; Licensure Preparation
Biomedical Engineering Tech.	BMT	233	Internship-Medical Systems I	5	1	0	12	0	Problem Solving; Use of Proper Interpersonal Skills; Interpreting Work Authorization; Identifying Logistical Support Requirements; Servicing Biomedical Instruments; Evaluating Operating Costs; Professional Development
Biomedical Engineering Tech.	BMT	243	Internship-Medical Systems II	1	1	0	12	0	Same as above
Accounting	BUS	153	Inst.Devel. Internship	3	0	0	0	10	Adv. Applic. of Classroom Knowledge & Skills; Listening; Following Directions; Work Environment Functions
Business and Information Technology	BUS	204	Internship	6	0	0	0	18	Applying Classroom Knowledge and Skills; Functioning in the Work Environment; Listening; Following Directions
Business Facilities Maint.	BUS	215	Medical Secretary Internship	12	0	0	0	36	Application of Classroom Knowledge & Skills; Work Environment Functions; Listening; Following Directions
Business and Office Technology	BUS	219	Legal Secretary Internship	12	0	0	0	36	Same as above
Information and Office Technology	BUS	221	Internship	6	0	0	0	18	Same as above
Business and Office Technology	BUS	224	Admin. Assistant Internship	8	0	0	0	24	Same as above
Business and Office Technology	BUS	225	Office Simulation	8	0	0	0	24	Same as above
Child Development Child Development and Related Care	CHD	121	Internship	3	1	0	0	6	Good Work Habits; Supervised Planning; Interaction with Children and Parents; Application of Guidance Techniques; Classroom Management
Child Development Child Development and Related Care	CHD	122	Internship II	3	1	0	0	6	Same as above

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Dental Hygiene	DHY	221	Clinical Dental Hygiene V Lab	4	0	0	0	12	Employability Skills; Office Management; Expanded Duties; Applied Techniques
Dental Laboratory, Dental Laboratory Technology (Diploma and Degree)	DLT	116	Practicum	10	0	0	0	32	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Interpretation of Work Authorizations; Application of Basic Fixed Prosthodontics Techniques; Professional Development
Dental Laboratory, Dental Laboratory Technology (Diploma and Degree)	DLT	117	Practicum	10	0	0	0	32	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Interpretation of Work Authorizations; Application of Basic Removable Prosthodontics Techniques
Dental Laboratory Technology (Degree)	DLT	214	Practicum	6	0	0	0	18	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Interpretation of Work Authorizations; Fabrication of Removable Partial Denture Prosthesis; Professional Development
Dental Laboratory Technology (Degree)	DLT	215	Practicum	6	0	0	0	18	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Interpretation of Work Authorizations; Fabrication of Crown and Bridge Prosthesis; Professional Development
Dental Laboratory Technology (Degree)	DLT	216	Practicum	6	0	0	0	18	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Interpretation of Work Authorizations; Fabrication of Complete Dental Prosthesis; Professional Development
Dental Laboratory Technology (Degree)	DLT	217	Practicum	6	0	0	0	18	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Interpretation of Work Authorizations; Fabrication of Dental Ceramics Prosthesis; Professional Development
Advanced Drafting	DDS	239	Practicum	4	0	0	12 OR	12	Specific Application Theory; Specific Application Layout; Advanced Drafting Skills and Techniques; Problem Solving; Presentation
Drafting and Design	DDS	240	Practicum	4	0	0	0	12	Electrical/Electronics Theory; Electrical Design; Electrical Layout; Electrical Adv. Drafting & Design; Problem Solving; Presentation

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Drafting and Design	DDS	241	O.B.I.	6	0	0	0	18	Office Practices; Seated Connections; Steel Shapes; Columns, Base Plates, and Splices; Beam Reactions; Framed Connections, Use of Proper Interpersonal Skills; Adaptability to Job setting
Drafting and Design	DDS	242	O.B.I.	6	0	0	0	18	Structural Steel Detailing; Reflected Ceiling Plans; Rebar Detailing; Commercial Construction Drawings; Use of Proper Interpersonal Skills; Adaptability to the Job Setting
Drafting and Design	DDS	243	O.B.I.	6	0	0	0	18	Belts and Pulleys; Clutches and Brakes; Sprockets and Chains; Gear Boxes; Hydraulics; Pneumatics; Use of Proper Interpersonal Skills; Adaptability to the Job Setting
Drafting and Design	DDS	244	O.B.I.	6	0	0	0	18	Structural Steel Detailing; Reflected Ceiling Plans; Rebar Detailing; Complete Sets of Commercial Const. Drawings; Mechanical and Electrical Systems; Site Plans; Use of Proper Interpersonal Skills; Adaptability to the Job Setting
Distribution and Materials Management	DMM	108	Distrib-ution OBI I	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Distribution Management Tech.; Professional Development
Distribution and Materials Management	DMM	109	Distrib-ution OBI II	3	0	0	0	10	Same as above
Distribution and Materials Management	DMM	112	Prod.Mtrls. & Inventory OBI I	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Production Materials & Inventory Management Techniques; Professional Development
Distribution and Materials Management	DMM	113	Prod.Mtrils& Inventory OBI II	3	0	0	0	10	Same as above
Electronics Technology (Biomedical Specialization)	BMI	233	Internship	5	1	0	12	0	Problem Solving; Use of Proper Interpersonal Skills; Interpreting Work Authorizations; Identifying Logistical Support Requirements; Servicing Biomedical Instruments; Evaluating Operating Cost; Professional Development

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Electronics Technology (Biomedical Specialization)	BMI	243	Internship	5	1	0	12	0	Same as above
Environmental Horticulture	EHO	115	Internship	3	0	0	0	10	Work Ethics, Skills, and Attitudes; Demands of the Horticulture Industry; Horticultural Business Management; Labor Supervision
Fashion Production and Management	FPM	114	O.B.I. - Alterations Internship	8	0	0	0	24	Applying Classroom Knowledge and Skills; Functioning in the Work Environment; Listening; Following Directions
Fashion Production and Management	FPM	117	O.B.I. - Fashion Management Internship	8	0	0	0	24	Same as above
Fashion Production and Management	FPM	127	O.B.I. - Clothing Design Internship	8	0	0	0	24	Applying Classroom Knowledge and Skills; Functioning in the Work Environment; Listening; Following Directions
Fashion; Production; and Management	FPM	137	O.B.I. - Home Textiles; Internship	8	0	0	0	24	Same as above;
Fashion; Production; and Management	FPM	147	O.B.I. - Tailoring; Internship	8	0	0	0	24	Same as above
Fashion; Merchandising	FSM	120	O.B.I. I - Apparel &; Accessories	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Applic. of Apparel & Accessories Techniques; Professional Development
Fashion Merchandising	FSM	121	O.B.I. II - Apparel & Accessories	3	0	0	0	10	Same as above
Forest Technology	FOR	118	O.B.I.	10	0	0	0	30	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Forest Technology Skills in a Workplace Setting; Professional Development

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Hotel/Restaurant/ Travel Management	HRT	110	O.B.I. I	4	1	0	0	9	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Hotel/Restaurant/Travel Management Techniques; Professional Development
Hotel/Restaurant/ Travel Management	HRT	120	O.B.I. II	4	1	0	0	9	Same as above
Hotel/Restaurant/ Travel Management	HRT	250	Internship	12	0	0	0	36	Same as above
Industrial Maint. & Industrial Maint. Technology	IMT	126	Practicum	4	1	0	9	0	Hard-Wiring PLC Equipment; Writing and Executing Programs; Troubleshooting PLC Circuits
Industrial Maint. & Industrial Maint. Technology	IMT	127	Internship	4	1	0	0	9	Application of Ind. Maint. Skills; Appropriate Employability Skills; Problem Solving; Adaptability to Job Equip. and Technology; Progressive Productivity; Acceptable Job Performance
Interiors	INT	130	O.B.I. I	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Interiors Techniques; Professional Development
Interiors	INT	131	O.B.I. II	3	0	0	0	10	Same as above
Law Enforcement	LAW	109	Practicum/ Internship	3	0	0	0	9	Observation and/or Participation in Law Enforcement Activities; Law Enforcement Theory Applications; Independent Study Project
Advanced Machine Tool Technology	MCA	250	Ints. Devel. Internship	6	0	0	0	20	Advanced Machine Tool Work Skills Development; Personal Skills Development
Machine Tool Technology	MCH	151	Inst. Devel. Internship	5	0	0	0	15	Work Skills Development; Personal Skills Development
Management and Supervision Development	MSD	110	O.B.I.	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Interpersonal Skills; Application of Mngt. & Supervisory Techniques; Professional Development
Marketing Management	MKT	130	O.B.I. I Marketing Admin.	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Interpersonal Skills; Application of Marketing Admin. Techniques; Professional Development
Marketing Management	MKT	131	O.B.I. II Marketing Admin.	3	0	0	0	10	Same as above

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Marketing Management	MKT	132	O.B.I. I Banking & Finance	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Interpersonal Skills; Application of Banking & Finance Techniques; Professional Development
Marketing Management	MKT	133	O.B.I. II Banking & Finance	3	0	0	0	10	Same as above
Marketing Management	MKT	134	O.B.I. I Entrepren-eurship	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Interpersonal Skills; Application of Entrepreneurship Techniques; Professional Development
Marketing Management	MKT	135	O.B.I. II	3	0	0	0	10	Same as above
Marketing Management	MKT	136	O.B.I. I Retail Management	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Retail Management Techniques; Professional Development
Marketing Management	MKT	137	O.B.I. II Retail Management	3	0	0	0	10	Same as above
Medical Laboratory Technology and Respiratory Therapist (Degree)	MLT	109	Clin. Phlebotomy, Urinalysis.& Serology Practicum	4	0	0	0	12	Urinalysis Tests; Serological Tests and Techniques; Blood and Specimen Processing; Correl. of Test Results to Disease States; Safety and Quality Control
Medical Laboratory Technology and Respiratory Therapist (Degree)	MLT	110	Clinical Immuno-hematology Practicum	6	0	0	0	20	Specimen Processing; Slide and Tube Immunological Techniques; Criteria for Special Techniques; Component and Therapy Practices; Management of Disease States; Transfusion Complications; Safety, Quality Control, and Recording
Medical Laboratory Technology and Respiratory Therapist (Degree)	MLT	111	Clinical Hematology/ Coagulation Practicum	6	0	0	0	20	Complete Blood Count and Differentials; Other Related Blood Tests; Coagulation and Fibrinolysis Tests; Correlation of Test Results to Disease States & Critical Levels; Instrumentation; Recording, Safety, and Quality Control

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Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Medical Laboratory Technology and Respiratory Therapist (Degree)	MLT	112	Clinical Micro-biology Practicum	6	0	0	0	20	Specimen Inoculations; Stains; Culture Work-ups; Bacterial Identification; Anti-microbial Sensitivity; Media Preparation, Safety, and Quality Control; Special Areas
Medical Laboratory Technology and Respiratory Therapist (Degree)	MLT	113	Clinical Chemistry Practicum	6	0	0	0	20	Therapeutic Drugs and Toxicology; Automated and Manual Chemistry; Immuno Chemistry; Special Chemistry; Recording, Safety, and Quality Control; Correlation of Test Results to Disease States and Critical Levels; Instrumentation
Management and Supervisory Development (Diploma & Degree)	MSD	110	Mngt. & Supervision OBI I	3	0	0	0	10	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Management and Supervisory Techniques; Professional Development
Management and Supervisory Development	MSD	156	Continuous Improvement Leader Internship	3	0	0	0	10	Continuous Improvement Plan Development; Site Preparation and Implementation; Group Presentations and Individual Consultation
Masonry	MSN	115	Internship	4	0	0	0	12	Blueprint Reading and Estimating; Safety; Tools, Materials and Equipment; Corners and Leads; Footings, Foundations, Piers, and Columns; Wall Construction; Fireplaces and Chimneys; Ornamental Masonry; Pointing, Cleaning, and Caulking
Medical Assisting	MAS	117	Externship	6	0	0	0	20	Application of Classroom Knowledge and Skills; Functioning in the Work Environment; Listening; Following Directions
Medical Assisting	MAS	150	INST. DEVEL.	5	2	0	0	9	Application of Classroom Knowledge and Skills; Functioning in the Work Environment; Evaluation of Performance in Clinical Setting
Practical Nursing	NSG	111	Nursing Funda-mentals	12	7	7	0	12	Orientation to the Profession; Ethics and Law; Community Health; First Aid; CPR; Geriatrics
Ophthalmic Dispensing	OPD	119	O.B.I.	6	0	0	0	18	Special Visual Problems; Contact Lenses; Analyzing Ophthalmic Problems; Ordering Procedures; Marketing Eyewear; Work Attitudes

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Paralegal Studies	PLS	118	O.B.I.	12	0	0	0	36	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Application of Paralegal Skills in a Workplace; Professional Development
Paramedic Technology	EMS	118	Clinical Application of Advanced Emergency Care	12	0	0	0	36	Ethics and Hospital Etiquette; Care of the Critical Intensive Care Patient; Intravenous Therapy; Airway and Ventilation Management; Management of Normal and Abnormal Deliveries; Management of the Pediatric Patient in the Emergency Department; Management of the Adult in the Emergency Department; Patient Care in an Advanced Ambulance; Psychological Intervention
Paramedic; Technology	EMS	150	Elective Practicum	5	0	0	0	15	Emergency Ambulance Services; Hospital Emergency Department Services; Emergency Ambulance Patient Transportation procedures; Venipuncture Techniques; Documentation of Emergency Medical Services
Pharmacy Technology	PHR	105	Practicum	7	0	0	0	21	Aseptic and Sterile Technique; Storage and Control; Documentation; Disinfection; Inventory; Medication Delivery; Filing; Hospital Pharmacy Techniques; Compounding; Parenteral Admixtures; Filtering
Pharmacy Technology	PHR	107	Practicum	7	0	0	0	21	Dispensing; Responsibilities; Patient Profiles; Physician Orders; Pharmacy Data Systems; Controlled Substances; Hyperalimentation; Ophthalmic Preparations; Chemotherapy; Hospital/Retail/Home Health Pharmacy Techniques
Physical Therapist Assistant	PTA	204	Practicum I	2	0	0	0	8	Patient Preparation; Therapeutic Heat and Cold; Equipment Prep.; Sterile Techniques; Goniometric Measurements; Interpersonal Communication Skills; Vital Signs; Transfers/Body Mechanics; Perfect Note Writing; Treatments Modification
Physical Therapist Assistant	PTA	208	Practicum II	2	0	0	0	8	Splint Application; Active Exercises; UV Treatment; Mechanical & Manual Restive Exercises; Shortwave Diathermy; Restive Exercise; Ultrasound Treatments; ADL Training; Cervical & Lumbar; Gait Training with Traction Assistive Device; Passive Exercises; Relaxation, Stretching, Coordination, and Endurance Exercises

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Physical Therapist Assistant	PTA	211	Practicum III	4	0	0	0	12	Therapeutic Exercises; Identifying Architectual Barriers; Stroke Rehabilitation; NDT Techniques; TENS Applications; PNF Techniques; Performance of Spec.Man. Muscle Trng.; Spinal Cord Injury; Rehab. Techniques; Gait Analysis; Amputee Rehabilitation; Postural Analysis
Physical Therapist Assistant	PTA	212	Practicum IV	12	0	0	0	32	Peripheral Vascular Compression; Therapeutic Electrical Stimulation; Cardiac Rehabilitation Techniques; Pulmonary Techniques; Pediatric NDT and Various Adaptive Devices for Children; Note Writing & Scheduling Skills Improvement
Plumbing	PLB	109	Practicum	12	2	0	32 OR	32	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Interpretation of Work Orders; Professional Development; Application of Basic Plumbing Skills and Techniques
Advanced Plumbing	PLB	119	Plumbing Internship II	13	0	0	0	40	Problem Solving; Adaptability to Job Setting; Interpretation of Work Orders; Customer Relations; Tool, Equipment, and Stock Maintenance; Application of Plumbing Techniques and Codes
Practical Nursing	NPT	112	Practicum	8	0	0	0	24	Wellness and Prevention of Illness; Nursing Care, Treatments, Drug and Diet Therapy Related to Patients with Disorders of the Cardiovascular, Respiratory, Endocrine, Urinary & Gastrointest. Systems
Practical Nursing	NPT	113	Practicum II	8	0	0	0	24	Wellness and Prevention of Illness; Nursing Care, Treatments, Drug and Diet Therapy Related to Patients with Disorders of the Musculoskeletal, Neurological, Integumentary, and Sensory Systems; Nursing Care, Treatments, Drug and Diet Therapy Related to Patients with Mental; Health Disorders; Oncology
Practical Nursing	NPT	214	Practicum	5	0	0	0	15	Wellness and Prevention of Illness; Nursing Care, Treatments, Drug & Diet Therapy Related to Patients with Disorders of the Reproductive System; Nursing Care, Treatments, Drug & Diet Therapy Related to Obstetric Patients.; Nursing Care, Treatments, Drug & Diet Therapy Related to Pediatric Patients; Growth and Development

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Practical Nursing	NPT	215	Practicum	3	0	0	0	9	Employability Skills; Leadership Skills; Management Skills
Printing & Graphics Technology	PGT	106	Practicum/; Internship	11	1	0	30 OR	30	Design Work; Process Photography; Typesetting; Composition Operations; Mechanical Art Organization & Maint.
Printing & Graphics Technology	PGT	107	Internship	10	0	0	0	30	Design Work; Process Photography; Typesetting; Organization & Maint.; Mechanical Art; Desktop Publishing
Printing & Graphics Technology	PGT	119	Practicum/ Internship	9	1	0	24 OR	24	Image Assembly; Color Stripping; Platemaking; Proofing; Film Composition
Printing & Graphics Technology	PGT	128	Practicum/ Internship	6	0	0	20 OR	20	Duplicator Operations; Advanced Duplicator Operations; Large Sheet Press Operations
Printing & Graphics Technology	PGT	129	Internship II	6	0	0	0	20	Duplicator Operations; Advanced Duplicator Operations; Large Sheet Press Operations
Printing & Graphics Technology	PGT	130	Practicum/ Internship	11	1	0	30 OR	30	Planning & Scheduling; Film Composition; Design Work; Color Stripping; Typesetting; Proofing; Mechanical Art; Duplicator Operations; Process Photography; Advanced Duplic. Oper.; Composition Operations; Lrg. Sheet Press Oper.; Organization & Maint. Procedures; Finishing & Bindery Operations; Desktop Publishing; Production Mngt., Trade Customs, & Work Ethics; Image Assembly; Platemaking
Radiologic Technology (Diploma & Degree)	RAD	132	Intro-ductory Clinical Radiography I	4	0	0	0	14	Orientation to Hospital Areas and Procedures; Orientation to Mobile/Surgery; Orientation to Readiography and Fluoroscopy; Part/Obsv of Procs Rel to Body Cav, Shoulder, Girdle, Upper Extremity; Part/Obsv of Rout Proj of Low Extr. Pelv Gird, Spine, Bony Thx
Radiologic Technology (Diploma & Degree)	RAD	133	Intro-ductory Clinical Radiography II	7	0	0	0	21	Equipment Utilization; Exposure Techniques; Participate/Observation of Routine Projection Lower Extremity, Pelvic Girdle, Spine, Bony Thorax; Part/Obsv of Procs Rel to Gastro (GI), Genit, & Biliary Systems

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Radiologic Technology (Diploma & Degree)	RAD	134	Inter-mediate Clinical Radiography I	7	0	0	0	21	Equipment Utilization; Exposure Techniques; Part/Obsv of Gastro (GI), Genit, & Biliary Systems Processes; Part in and/or Obsv of Cranial & Facial Rad.
Radiologic; Technology (Diploma & Degree)	RAD	135	Inter-mediate Clinical Radiography II	7	0	0	0	21	Sterile Techniques; Participation/Observation of Minimum Special Procedures, Special Equipment Use, Genit; Systems Procedures; Part in and/or Obsv of Cranial & Facial Rad.
Radiologic; Technology (Diploma & Degree)	RAD	136	Inter-mediate Clinical Radiography III	7	0	0	0	21	Advanced Radiographic Anatomy; Equipment Utilization; Exposure Techniques; Sterile Techniques; Part/Obsv of Angio, Intrv, Min Spec, & Spec Genit Sys Procs; Part in and/or Obsvt of Special Equip Use
Radiologic Technology (Diploma & Degree)	RAD	137	Advanced Clinical Radiography I	9	0	0	0	28	Equipment Utilization; Exposure Techniques; Participation and Observation of Routine & Special Radiographic Procedures
Radiologic Technology (Diploma & Degree)	RAD	138	Advanced Clinical Radiography II	9	0	0	0	28	Equipment Utilization; Exposure Techniques; Participation/Observation of Routine & Special Radiographic Procedures; Final Completion of All Required Clin. Comp.
Radiologic Technology (Diploma & Degree)	RAD	139	Advanced Clinical Radiography III	1	0	0	0	4	Advanced Equipment Utilization; Advanced Exposure Techniques; Participation/Observation of a Chosen Imaging Modality
Respiratory Therapy Technology	RES	121	Respiratory Clinical Orientation	2	0	0	0	8	Cardiopulmonary Resuscitation (CPR) Cert.; Orientation to the Hospital; Observation
Respiratory Therapy Technology	RES	122	Respiratory Care I	2	0	0	0	8	Clinical Patient Assessment; Humidity/Aerosol Therapy; Oxygen Therapy; Hyperinflation Therapy; Bronchial Hygiene
Respiratory Therapy Technology	RES	123	Respiratory Care II	2	0	0	0	8	Humidity/Aerosol Therapy; Oxygen Therapy; Hyperinflation Therapy; Bronchial Hygiene; Patient Assessment and Monitoring; Pulmonary Diagnostics
Respiratory Therapy Technology	RES	124	Respiratory Critical Care I	5	0	0	0	16	Ventilatory Management; Basic Hemodynamics

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Respiratory Therapy Technology	RES	125	Respiratory Critical Care II	10	0	0	0	32	Ventilation Management; Specialty Rotations; Comp. of All Required Clinical Competencies
Respiratory Therapist (Degree)	RTT	209	Clinical Practice I	2	0	0	0	8	Introduction to Clinical Affiliate; Medical Gas Therapy; Oxygen Therapy; Aerosol Therapy; Incentive Spirometry; Patient Assessment; Cardiopulmonary Resuscitation; Medical Ethics
Respiratory Therapist (Degree)	RTT	210	Clinical Practice II	2	0	0	0	8	Medical Gas Therapy; Oxygen Therapy; Aerosol Therapy; Patient Assessment; Incentive Spirometry
Respiratory; Therapist (Degree)	RTT	218	Clinical Practice III	2	0	0	0	8	Intermittent Positive Pressure Breathing; Chest Physiotherapy; Airway Care; Medical Gas Therapy; Oxygen Therapy; Aerosol Therapy; Incentive Spirometry; Patient Assessment
Respiratory Therapist (Degree)	RTT	219	Clinical Practice IV	2	0	0	0	8	Intermittent Positive Pressure Breathing; Chest Physiotherapy; Airway Care; Medical Gas Therapy; Oxygen Therapy; Aerosol Therapy Incentive Spirometry; Patient Assessment; Respiratory Care of the Crit. Care Patient
Respiratory Therapist (Degree)	RTT	220	Clinical Practice V	5	0	0	0	16	Basic Respiratory Care of Crit. Care Patients; Tracheostomy Care; Ventilator Monitoring; Arterial Blood Coll.; Blood Gas Analysis; EKG
Respiratory Therapist (Degree)	RTT	222	Clinical Practice VI	10	0	0	0	32	Mech. Vent. Init.; Patient Stabilization; Crit. Care Monit.; Hemodynamic Measurement; Hemodynamic Eval.; Bronchial Hygiene; Weaning Mechanics; Extubation; Art. Line Sampling; Advanced Diagnostics; Pediatric/Neonatal Respiratory Care; Rehabilitation/Home Care
Research Laboratory Technician	SCT	225	O.B.I.	12	0	0	0	36	Measurement Techniques; Purification Techniques; Industrial Laboratory Techniques; Laboratory Operations; Data Acquisition and Analysis; Industrial Safety
Surgical Technology	SUR	112	Practicum	7	0	0	0	7	Scrubbing, Gowning, Gloving, and Draping; Assistance with Patient Care; Processing of Instruments and Supplies; Maintenance of a Sterile Field; Basic Instrumentation; Environmental Sanitation

Course	Alpha	Numeric	Title	Credits	Class	DLab	Plab	OBI	Competencies
Surgical Technology	SUR	113	Practicum	8	0	0	0	24	Assistance, Scrubbing, and Circulation of Routine Procedures; Part/Obsv of General Surgery; Part/Obsv of Gastrointestinal Surgery; Part/Obsv of Gynecological Surgery; Part/Obsv of Genitourinary Surgery; Part/Obsv of Head and Neck Surgery
Surgical Technology	SUR	114	Practicum	8	0	0	24 **OR**	24	Primary Scrub on General Surgical Procedure; Primary Scrub on Specialty Surgical Procedure; Secondary Scrub on Expanded Spec. Procedure; Part/Obsv of Ophth, Plast, Thor, Vasc, Card, & Neurological Surgical Procedures; Completion of All Required Surgical Clinical Competencies
Truck Repair	TRT	120	Internship	6	0	0	0	15	Applying Truck Repair Technology Knowledge and Skills; Demonstrating Employability Skills; Solving On-the-Job/Technical Problems; Productivity; Acceptable Job Performance; Applying Shop/Vehicle Safety
Veterinary Technology	VET	130	Internship	10	0	0	0	32	Problem Solving; Adaptability to the Job Setting; Use of Proper Interpersonal Skills; Interpretation of Work Authorizations; Participation in or Observation of Veterinary Technology Procedures; Professional Development
Advanced Visual Communications	VCM	119	Portfolio Preparation/Internship	2	0	0	8 **OR**	8	Layout; Paste-up; Audiovisuals; Desktop Publishing; Computer Graphics